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A NEW SEA STAR OF THE GENUS PORANIOPSIS FROM
JAPAN

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THE NEW species of *Poraniopsis* (Echinasteridae) described herein was known to me 30 years ago. It was found in a jar containing fishes dredged off Honshu, Japan, by the *Albatross* in 1906. The genus is an isolated one with a rather curious distribution. First, there is the present Japanese species, the extent of whose range is unknown. *P. inflata* (Fisher) has been dredged from off Oregon to San Diego, Calif., in 26 to 159 fathoms. *P. inflata flexilis* Fisher is a deeper-water race (344 to 600 fathoms) from California, and probably extends to the Gulf of Panama, 458 fathoms. The latter record is based on *Alexandraster mirus* Ludwig, 1905, which is doubtfully distinct. *Poraniopsis mira* (Ludwig) is untenable on account of *Poraniopsis mira* (de Loriol) described a year prior as *Lahillea mira*. In the Magellanic region is found *P. echinaster* Perrier, type of the genus, its range extending to Gough Island south of Tristan da Cunha, 50 to 70 fathoms. I have examined a specimen from this locality and it is *P. echinaster* rather than *P. capensis* H. L. Clark, from Cape Colony, 160 to 230 fathoms. Finally, there is *P. mira* (de Loriol) from the Gulf of San Mathias, Argentina, very distinct from *P. echinaster*.

Genus PORANIOPSIS Perrier

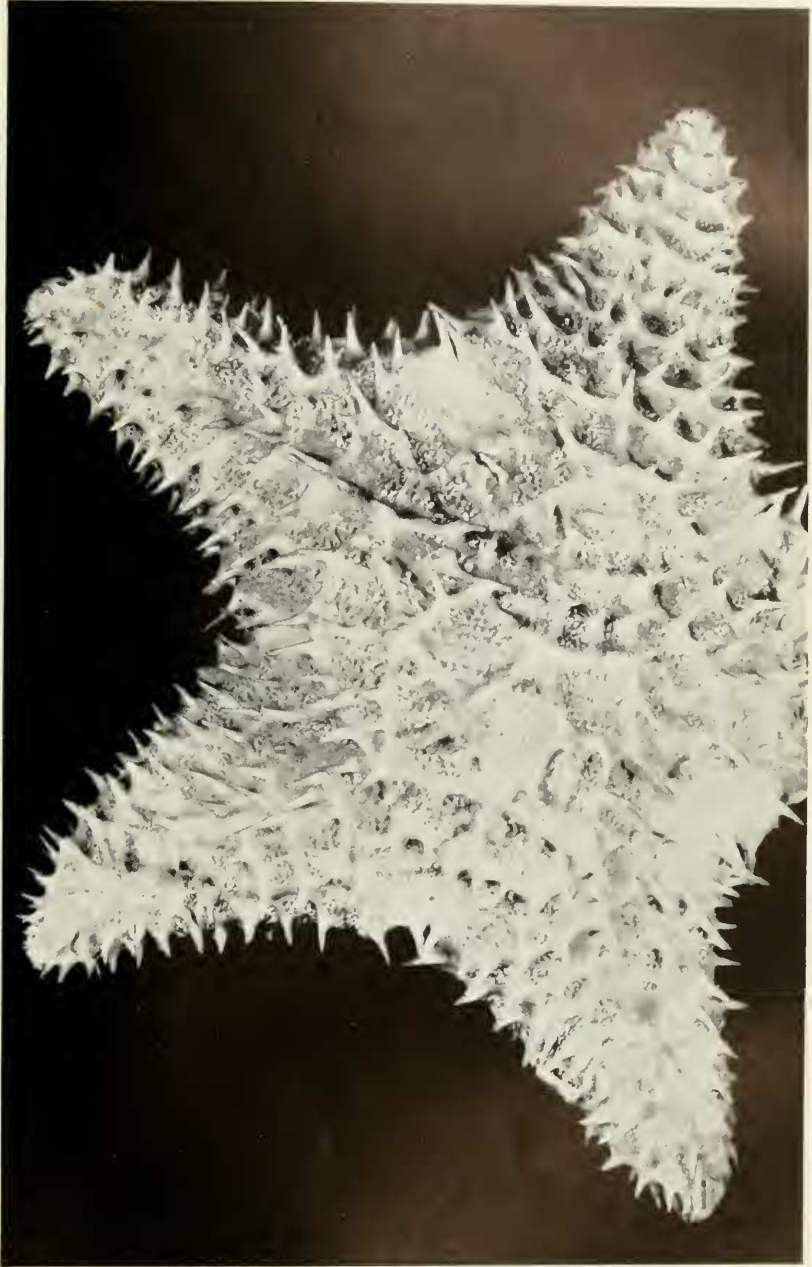
PORANIOPSIS JAPONICA new species

FIGURE 56; PLATES 55, 56

Poraniopsis sp. FISHER, U. S. Nat. Mus. Bull. 76, pt. 1, p. 264, 1911 (off Houshu, Japan, 182 fathoms).

Diagnosis.—Differing from *P. inflata* (Fisher) in having a larger disk, rays broader at base, a decidedly broader abactinal area with more numerous abactinal spines, numerous delicate thorny spinelets immersed in the thick membrane of papular areas, more widely spaced inferomarginal spines, adambulacral spines without well-marked groove. $R=77$ mm, $r=38$ mm, $R=2r$, $br=40$ mm.

Description.—When the animal is viewed directly from above the superomarginal series of spines curves downward on the sides of ray and marks the border of the actinal area. In *inflata* it is higher on side of ray and fairly straight. As a result the abactinal area is broader in *japonica*. Including the first superomarginal spine of each side, one can count 10 to 12 spines across base of ray, whereas in *inflata* the number is 5 to 8. This means that the dorsolateral spines are more numerous in *japonica*; and as the photograph shows, neither they nor the median radial spines form regular longiseries. These spines are about as long as in *inflata* of comparable size, that is, from 3 to 6 mm, the apparent height being somewhat enhanced by the central convexity of the lobed plate upon which they stand. The skeleton forms well-marked rounded ridges connecting the spines and outlining the large papular areas with their papulae. The skin is rather thicker than in *inflata* and is traversed by numerous anastomosing channels. On the papular areas are low dermal papillae smaller than the papulae, in which are delicate, slender spinelets with thorny sharp projections all along the sides. These spinelets are 0.4 to 0.55 mm long and 0.15 mm thick including thorns, which are 0.027 mm long. These are in the outer layer of the integument. Usually independent of the dermal spinelets, in a lower layer of the integument, are more numerous small plates, 0.12 to 0.6 mm in diameter. The smallest are scarcely more than 3 tiers of very open irregular meshwork, but the largest are thick and opaque under high power. It may be that the thorny spinelets were originally connected each with a platelet and became dissociated by a swelling of the dermis in alcohol, but there are more platelets than spinelets. The latter resemble the dermal spinelets of *Poronia glabra* Sladen and may prove to be as variable in number as in that species. They have not been detected in *inflata* and *echinaster* but immediately suggest the thorny dermal spinelets of *Poraniopsis mira* (de Loriol).



PORANIOPSIS JAPONICA, NEW SPECIES.

Abactinal surface of type. Slightly larger than natural size.



PORANIOPSIS JAPONICA, NEW SPECIES.

Actinal surface of type. Slightly larger than natural size.